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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.		
10/675,374	09/30/2003	Thomas McNulty	125640-1	5988		
6147	7590 11/17/2006		EXAM	EXAMINER		
GENERAL ELECTRIC COMPANY			ZIMMER, MARC S			
GLOBAL R PATENT DO	ESEARCH OCKET RM. BLDG. K1-4	IA59	ART UNIT	PAPER NUMBER		
NISKAYUN	JA, NY 12309		1712			
			DATE MAILED: 11/17/200	6		

Please find below and/or attached an Office communication concerning this application or proceeding.

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		Application No.	Applicant(s)			
		10/675,374	MCNULTY ET AL.			
	Office Action Summary	Examiner	Art Unit			
		Marc S. Zimmer	1712			
Period fe	The MAILING DATE of this communicat or Reply	ion appears on the cover sheet w	ith the correspondence address	s		
A SH WHIO - Exte after - If NO - Failt Any	IORTENED STATUTORY PERIOD FOR CHEVER IS LONGER, FROM THE MAIL ensions of time may be available under the provisions of 37 r SIX (6) MONTHS from the mailing date of this communic D period for reply is specified above, the maximum statutor ure to reply within the set or extended period for reply will, reply received by the Office later than three months after the patent term adjustment. See 37 CFR 1.704(b).	ING DATE OF THIS COMMUNION (CFR 1.136(a)). In no event, however, may a lation. Ty period will apply and will expire SIX (6) MON by statute, cause the application to become Al	CATION. reply be timely filed NTHS from the mailing date of this commur BANDONED (35 U.S.C. § 133).			
Status						
1) 又	Responsive to communication(s) filed o	n 10 November 2006.				
		☐ This action is non-final.				
3)□	· <u>—</u>					
	closed in accordance with the practice u	under <i>Ex par</i> te <i>Quayle</i> , 1935 C.D). 11, 453 O.G. 213.			
Disposit	ion of Claims					
5)□ 6)⊠	Claim(s) 17-24,26,27 and 34-40 is/are page 4a) Of the above claim(s) is/are value claim(s) is/are allowed. Claim(s) 17-24,26,27 and 34-40 is/are race claim(s) 35-37 is/are objected to. Claim(s) are subject to restriction	vithdrawn from consideration.				
Applicat	ion Papers	·				
9) <u> </u>	The specification is objected to by the Ex The drawing(s) filed on is/are: a). Applicant may not request that any objection Replacement drawing sheet(s) including the The oath or declaration is objected to by	☐ accepted or b)☐ objected to n to the drawing(s) be held in abeyar correction is required if the drawing	nce. See 37 CFR 1.85(a). (s) is objected to. See 37 CFR 1.			
Priority (under 35 U.S.C. § 119					
12)□ a)	Acknowledgment is made of a claim for the All b) Some * c) None of: 1. Certified copies of the priority documents. 2. Certified copies of the priority documents. 3. Copies of the certified copies of the application from the International See the attached detailed Office action for	numents have been received. Euments have been received in A The priority documents have been Bureau (PCT Rule 17.2(a)).	pplication No received in this National Stag	е		
Attachmen	et(s) te of References Cited (PTO-892)	سنتممنا □ (۸	Nummany (PTO 442)			
2)	the of References Cited (FTO-692) the of Draftsperson's Patent Drawing Review (PTO-5 mation Disclosure Statement(s) (PTO/SB/08) the No(s)/Mail Date	948) Paper No(s	Summary (PTO-413) s)/Mail Date nformal Patent Application			

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Claim Objections

Claims 35-37 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim.

Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 34 is directed to a process of making a ceramic core whereas claims 35-37 recite a method of using the ceramic core made by the process of claim 34. That is to say, the process steps outlined in these claims do not further define a method of making a core but, rather, its use. These claims should be restated as a, "method of making a turbine" that may restate the steps associated with making the core but also include the steps of using the core.

Claim Rejections - 35 USC § 112

Claims 17-24, 26-27, and 34-40 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter that was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Applicant is advised that the Specification does not appear to support the notion that it is the ceramic slurry that has a viscosity in the specified range. More accurately, the Examiner believes that the silicone matrix (base polymer and crosslinker) alone, which represents one part of the slurry where the ceramic filler is the other part, has a viscosity of 1 to 1000 cs. Indeed, paragraph 38 of

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the Specification says that the uncured silicone matrix has a viscosity within this range, not the slurry.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 17-19, 21-24, 27, 34, and 38 are rejected under 35 U.S.C. 102(b) as being anticipated by Mine et al., U.S. Patent # 4,269,753 for the reasons outlined in a previous correspondence. The incorporation of solvents is disclosed in column 5, lines 44-45.

Claims 18, 21, 23, 34, and 38 are rejected under 35 U.S.C. 102(b) as being anticipated by Atwell et al., U.S. Patent # 4,888,376 for the reasons outlined in a previous correspondence. Relevant to claim 38, Example 1 teaches the preparation of a paste containing solvent, polymer, and inorganic powders.

Claims 17-19, 21, 24, 34, and 34 are rejected under 35 U.S.C. 102(b) as being anticipated by Schilling et al., U.S. patent # 5,162,480 for the reasons outlined in a previous correspondence.

In Applicant's response, it is emphasized that the claimed core has a very specific defined shape. The Examiner notes, however, that there is no description of any particular form taken by the core. Indeed, there is no mention of the capacity in

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which the core is used and, hence, not even an implication of shape is made by the claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mine et al., U.S. patent # 4,269,753, Atwell et al., U.S. patent # 4,888,376, and/or Schilling et al., U.S. patent # 5,162,480 for the reasons outlined in a previous correspondence.

Claims 35-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schilling et al., U.S. Patent # 5,162,480 in view of Robb et al., U.S. Patent # 4,901,450, Lirones et al., U.S. patent # 3,957,715 and/or Applicant's admission in paragraph 2 that investment casting techniques are well known.

In column 6, lines 48-52, Schilling contemplates using the ceramic material that represents their invention for products of interest in the aerospace industry including "gas turbine blades, support structures, leading edges on spacecraft wings, and the like." This, in the Examiner's estimation, is suggestive of not only blades made from the ceramic material themselves but also of cores used in the manufacturing process for making blades from molten metal. *Schilling* does not outline the steps involved in making a turbine blade but the steps recited in claim 37 are typical of an investment

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casting process which, again, Applicant has already acknowledged are well known.

Robb et al and Lirones et al, which is cited by Robb, both describe in general terms an investment casting procedure. See, for instance, column 1, lines 14-41 of Robb.

Claims 38 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mine et al., U.S. patent # 4,269,753. Mine does not specify at what point the solvent is removed but the skilled artisan will appreciate that it should be done only during or after step (d) as the slurry that is added to the core mold/die should be of a consistency that it readily flows and fills the cavity in step (c) and that characteristic is imparted by the presence of a diluent.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc S. Zimmer whose telephone number is 571-272-1096. The examiner can normally be reached on Monday-Friday 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

November 14, 2006

MARC S. ZIMMER
BRIMARY EXAMINER